Native American Infant Mortality

What, Why, and How can I Help ?

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Presentation Objectives

- Define US Infant Mortality Rates including perinatal & postnatal mortality rates
- Describe the Causes of Infant Mortality
- Identify the differences in Native American (American Indian/Alaska Native) and Non Hispanic White Infant Mortality Rates
- What are risk factors specific to AI/AN populations?
- Define Health Disparity and how that applies to Native Americans Infant Mortality Rates
- What is being done currently by the Indian Health Services
- What can midwives and health providers do to change outcomes?

What is Infant Mortality?

- Infant mortality refers to the death of an infant during the first year of life
  - Number of deaths among infants under one year old per 1,000 live births in a given year

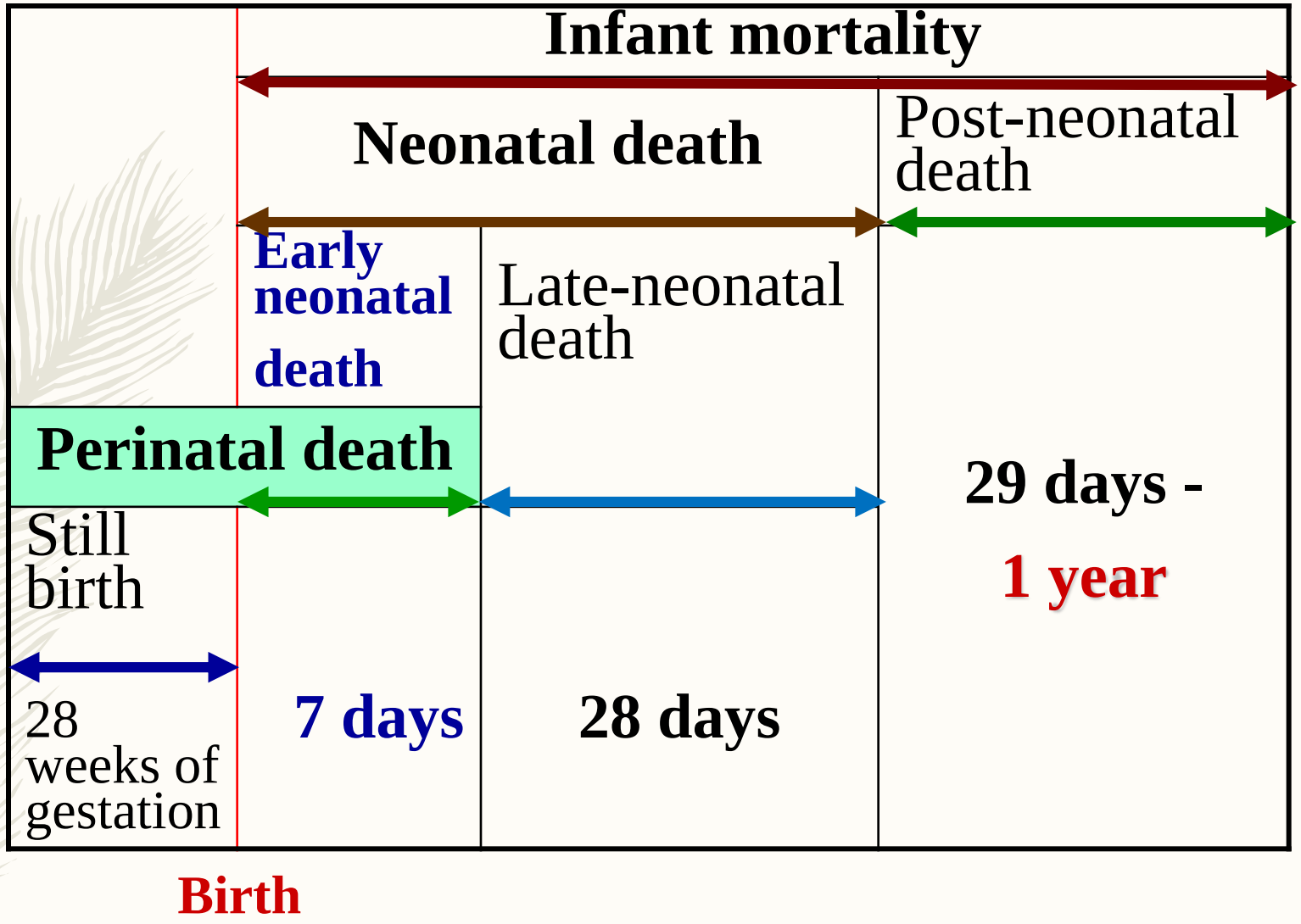
which includes Perinatal Death:

- Early neonatal death rate (death rate during the first 168 hours of life)
- Late neonatal death rate (death rate at the second, third and fourth weeks of life)
- Neonatal death rate (death rate at the first four weeks of life)

and Postnatal Death:

- Postnatal death rate (death rate beginning from 29 days of life till 1 year).

Mortality in and around infancy

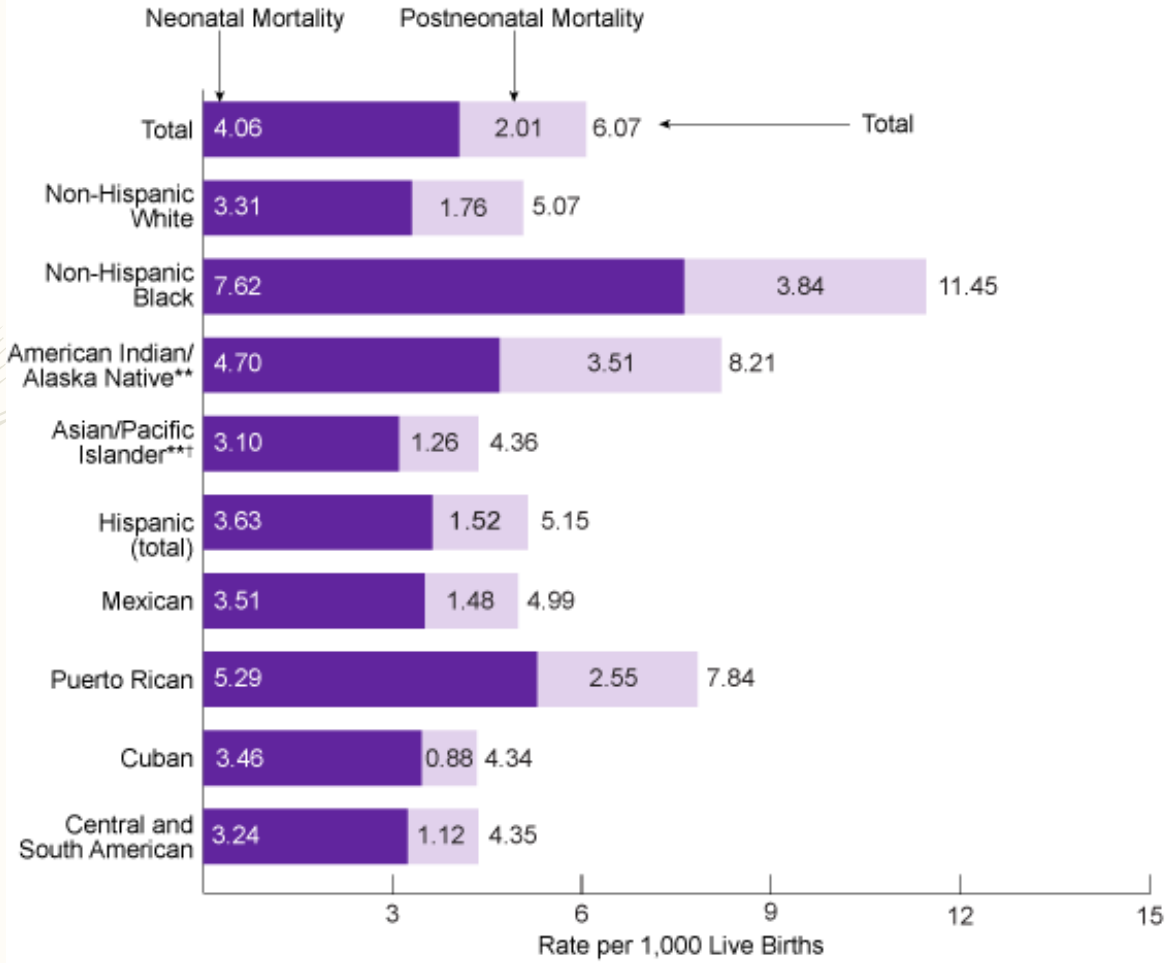


Infant Mortality in the U.S.

- In the US according to CDC in 2013 the US rate was 6.5 deaths per 1000 live births. U.S. ranked 26th among industrialized countries in 2014
  - Rate about 40% higher than the rate for Japan, Sweden, or Singapore
- Black infants die at twice the rate of white infants— about 12 %
- Native American -- American Indian/Alaska Native (AI/AN) rates higher than in non-Hispanic (NH) –whites (8.3 %)

Centers for Disease Control and Prevention (CDC)

Figure 2. Infant, Neonatal, and Postneonatal Mortality Rates,* by Maternal Race/Ethnicity, 2011



**Infant deaths are of those less than 1 year old; neonatal deaths are of those less than 28 days old; postneonatal deaths are of those at least 28 days old and less than 1 year old. **May include Hispanics. †Separate data for Asians, Native Hawaiians, and other Pacific Islanders are not available.*

Source: U.S. Department of Health and Human Services,Centers for Disease Control and Prevention, National Center for Health Statistics. 2011 Linked Birth/Infant Death File. Analyzed by the U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau.

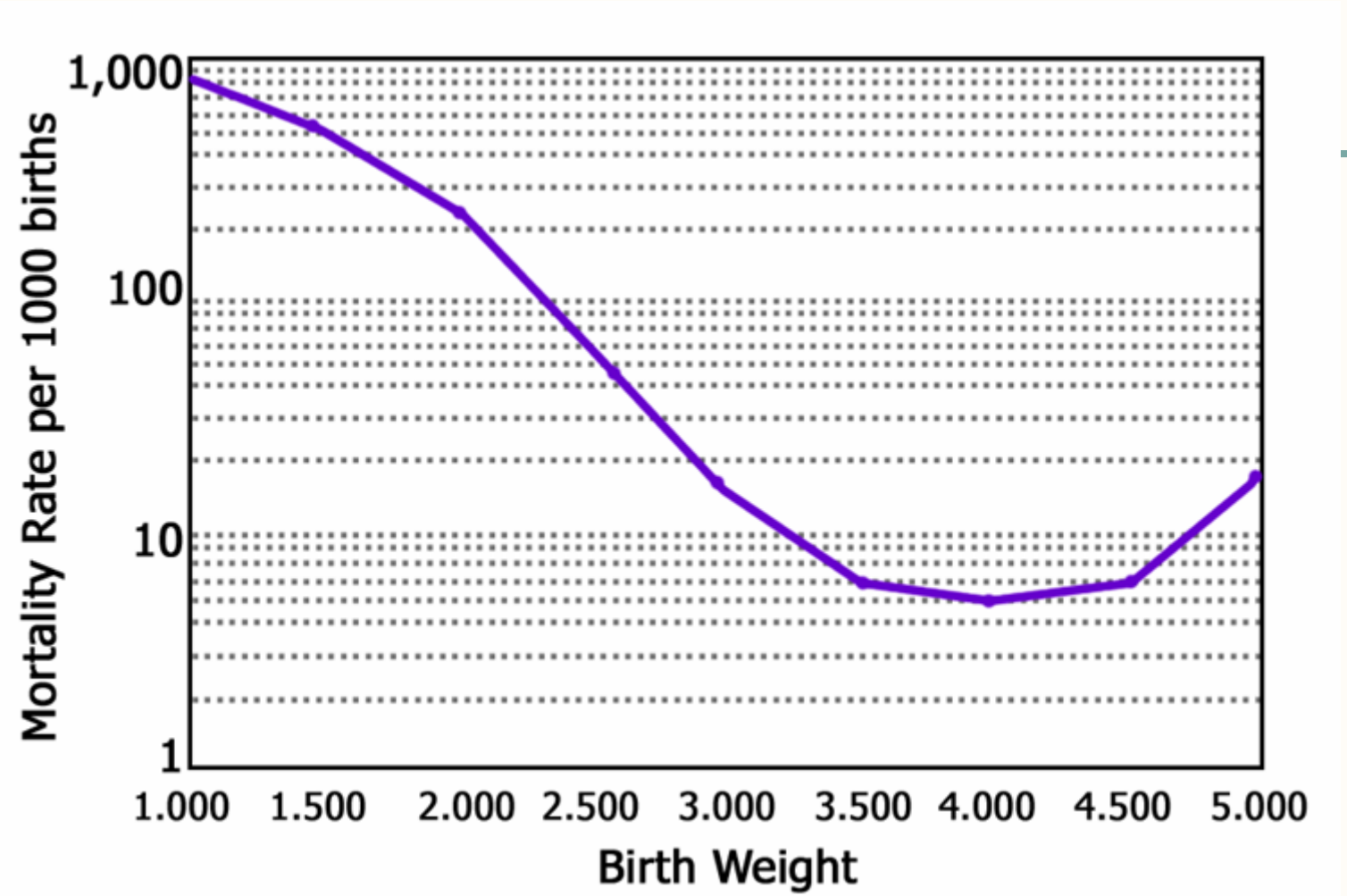
Causes of Infant Mortality in U.S.

- Leading causes of infant death
  - Congenital anomalies
  - Pre-Term Birth/Low Birth Weight
  - Sudden Infant Death Syndrome
  - Problems related to maternal complications of pregnancy
  - Problems related to complications of placenta, cord, membranes
  - Respiratory Distress Syndrome

Birth Weight and Gestational Age

- Birth weight is a powerful predictor of infant mortality
- Low Birth Weight infants are 21 times more likely to die within the first year of life than normal weight infants
- Very Low Birth Weight infants are 87 times as likely to die as normal-weight infants

Relation of Perinatal Mortality

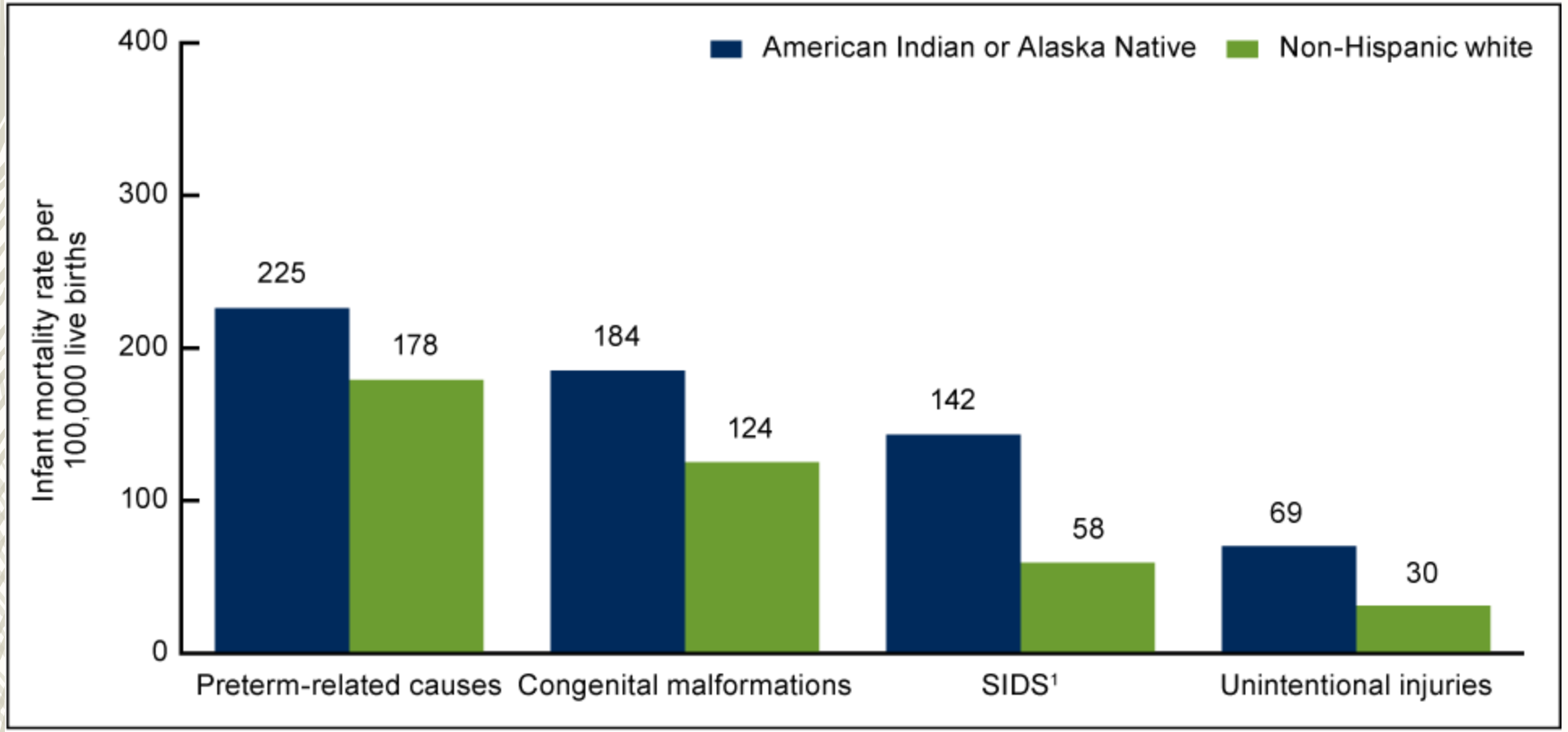


Source: Shapiro S., McCormick M.C., et al. Relevance of correlates of infant deaths for significant morbidity at 1 year of age. **Am. J. Obstet. Gynecol.** ***136: 363-373, 1980***

American Indian/Alaska Natives Infant Mortality Rates

- American Indian/Alaska Natives have 1.5 times the infant mortality rate as non-Hispanic whites.
- American Indian/Alaska Native babies are 115% higher as non-Hispanic white babies to die from sudden infant death syndrome (SIDS).
- American Indian/Alaska Native infants are 70 percent more likely as non-Hispanic white infants to die from accidental deaths before the age of one year.
- Respiratory distress related to influenza or pneumonia is also a cause of increased infant mortality rates among AI/AN with risk increasing as birth weight decreases in general

Figure 5. Infant mortality rates for selected causes of death for American Indian or Alaska Native and non-Hispanic white women: United States, 2007



[1]Sudden infant death syndrome.
SOURCE: CDC/NCHS, linked birth/infant death data set, 2007.

American Indian/Alaska Natives Risk Factors

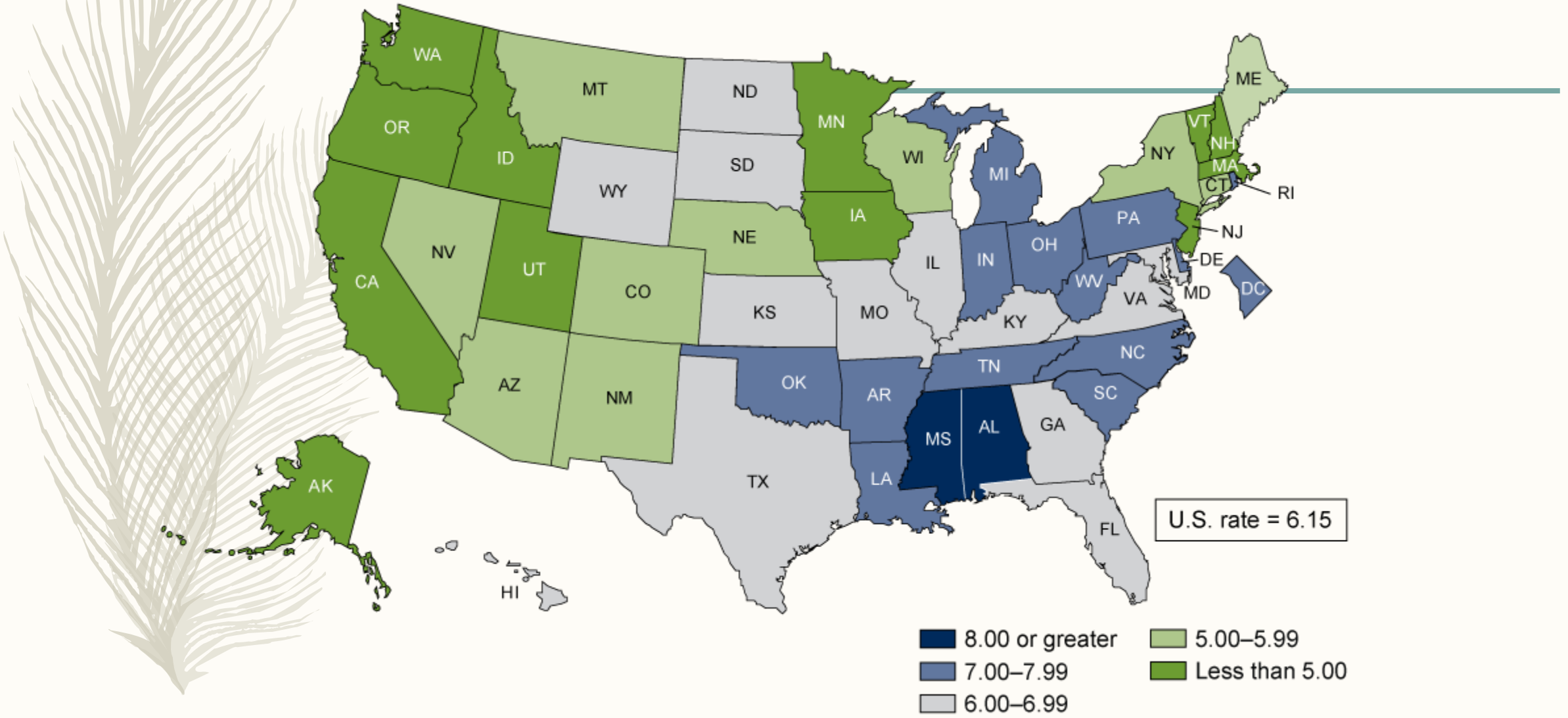
- AI/AN have higher risks than whites of low birth weight (5.8% and 4.9% respectively) and preterm birth (11% and 8.3% respectively).
- AI/AN have higher macrosomia rates (birth weight >4000g) of 16–31% compared to whites and AI/AN had a higher percentage of infant deaths among birth weights >4000g compared to whites (4.8% and 2.2% infant deaths >4000g, respectively). There may also be racial/ethnic differences in the effects of maternal diabetes on birth weight.
- In data from 2006 on gestational age independent from birth weight, infant mortality rates were higher among AI/AN mothers when compared with NH-white mothers at both 34–36 weeks of gestation (9.7 and 6.6 per 1,000 live births) and 37–41 weeks of gestation, (4.9 and 2.2 per 1,000 live births)

Infant deaths and mortality rates for the top 4 leading cause of death for American Indian/Alaska Native, 2013. (Rates per 100,000 live births)

Cause of Death (By rank)	# American Indian/Alaska Native Deaths	American Indian/Alaska Native Death Rate	#Non-Hispanic White Deaths	Non-Hispanic White Death Rate	American Indian/Alaska Native/Non-Hispanic White Ratio
(1) Congenital malformations	71	154.4	2,443	114.7	1.3
(2) Low-Birthweight	44	95.7	1,585	74.4	1.3
(3) Sudden Infant Death Syndrome (SIDS)	36	78.3	854	40.1	2.0
(4) Accidents (unintentional injuries)	22	47.8	583	27.4	1.7

Source: CDC 2015. Infant Mortality Statistics from the 2013 Period Linked Birth/Infant Death Data Set. *National Vital Statistics Reports*. Table 5.

Geographic Disparities in Infant Mortality, by State – US, 2010



What are Health Disparities?

Differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups in the United States.

Specifically AI/AN people have lower life expectancy, disproportionate disease burden, and higher infant mortality than other Americans, except African Americans.

Why do these disparities exist?

- Education & Socioeconomic factors
- Diet including obesity rates
- Insurance gap, access to health exams, screenings
- Smoking, alcohol consumption
- Physical activity levels
- Language and communication problems (e.g., cultural variation in how pain is expressed)
- Ethnic/racial concordance or discordance between practitioners and patients, racial and ethnic discrimination
- Hierarchies of choice in health-care seeking
- Cultural beliefs and values
- Historical & Intergenerational Trauma

Social Causes of AI/AN Health Disparities

Historical Trauma

- Emotional and psychological wounding and group trauma over generations and throughout lifespan.
- The unresolved trauma of genocide, loss of culture, forcible removal from family, and traditional lands (Reservations and boarding schools), European and American colonialist policy

Migration to Urban Areas

- Lack of cultural and family ties
- Feelings of isolation in predominate culture
- Discrimination in jobs, housing, leading to poverty

Intergenerational Trauma

- Exposure of an earlier generation to a traumatic event that continues to affect subsequent generations.

- The dynamics to historical or intergenerational trauma include layers of grief due to the erosion of the family, the erosion of Tribal structure, the loss of cultural traditions and practices, and the loss of spiritual ties.

- Manifestations of historical trauma include depression, self-destructive behavior (violence and substance use disorders), psychic numbing, anger, elevated mortality rates from suicide, and cardiovascular diseases observed among Jewish Holocaust survivors and descendants, and American Indian people.

AI/AN Risk Factors for Poor Pregnancy Outcomes

- AI/AN mothers:
  - Smoke more during pregnancy with highest rates in Alaska (45.1%) and the North Plains (44.2%), and lowest in the Southwest (17.0%);
  - consume alcohol at high rates during pregnancy;
  - poly substance abuse and dependence including methamphetamine, opioids and alcohol;
  - high rates of domestic violence and sexual assault;
  - higher rates of teen pregnancy;
  - high rates of obesity (37.7%);
  - high rates of poverty, low education, under employment;
  - enter prenatal care late and have fewer visits.

Role of Nutrition on Risk Factors for AI/AN Mothers

Ancestral diets differ from modern diet

- Great variety of nutrients
- Low fat
- High protein
- Complex carbohydrates
- Few nutritional deficiency diseases
- High cholesterol
- High fiber, calcium, vitamin C
- Low sodium

Poverty Risk Factors

- Access to care – distance from Tribal Health Service
- Stress - have an impact on the immune system not yet fully studied
- Young, Single mothers have higher risk factors and poorer outcomes
- Lack of access to supplements, vitamins, or alternative medicines
- Live in Food Deserts – little or no access to fresh fruit and vegetables
- Addiction/alcoholism if not present exposure also risk factors such as domestic violence
- Death by Police - While Native Americans only make up 0.8 percent of the population, they make up 1.9 percent of all police killings

Solutions in process across Indian Health Services

Baby Friendly Hospital Initiatives

- Goal is all 13 IHS maternity hospitals will be designated Baby Friendly by the end of 2016.

Family Spirit Program

- An evidence-based, culturally tailored home-visiting program of the Johns Hopkins Center for American Indian Health to promote optimal health and wellbeing for parents and their children

Centering Pregnancy

- Group Model for Prenatal Care to Empower and Engage Women

Sharing Cradleboards

Community Group Making Cradleboard offer cultural as well as family and parenting support

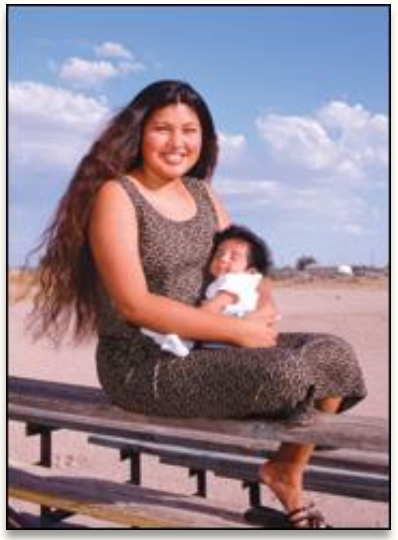
What Can You Do To Help?

- Native American Community Organizations even if not specific to pregnancy and family can help with maintaining cultural identity and support.
- Any support groups for breastfeeding and childbirth
- Learn community resources in your area, social service help lines, food banks, housing and energy assistance, a little bit of help can go a long way when things are tight.

Helping is Not Lecturing

- “Tackling the environment should not be a license to lecture people, because they have no excuse not to exercise, or eat their fruit and vegetables. Nannying - at least among adults - is likely to be counterproductive. Providing information is empowering; lecturing people is not. So, no excuses, no nannying."

Andrew Lansley



What Can You Do to Reduce Cultural Health Disparity?

- **L**isten to the person perception of the problem.
- **E**xplain your perception of the problem
- **A**cknowledge and discuss the differences and similarities.
- **R**ecommend treatment.
- **N**egotiate agreement about treatment.

Berlin and Fowkes, Western Journal of Medicine

"A nation's greatness is measured by how it treats its weakest members."
~ Mahatma Gandhi